

Amendments to the Specification:

Please replace the Abstract with the following rewritten Abstract:

A pipe joint device using flanges is ~~disclosed~~ provided. The pipe joint device includes: flanges mounted to ends of pipes to be coupled together or ends of both a pipe and a pipe joint to be coupled together, the flange having at least one ring groove around an outer circumferential surface thereof; a packing mounted to the flanges and having inner rings around an inner circumferential surface thereof to closely engage with the ring grooves of the flanges; and a clamp having a packing seat to seat the packing therein, with a support sidewall formed by a radial inward extension of each side of the clamp, the clamp being divided into a plurality of clamp parts so that the clamp parts are placed around the packing and are fastened together by a locking member.

Please replace paragraph number [0004] with the following rewritten paragraph:

[0004] In addition to the above-mentioned pipe jointing technique, another jointing technique using clamps and rubber packings has been widely used. However, this jointing technique is problematic in that jointed pipes may be removed from rubber packings when horizontal or vertical force is applied to the jointed pipes. In an effort to overcome the above-mentioned problem, a packing having an improved structure was proposed, which is provided with a ring-shaped channel along an inner surface thereof as shown in FIG. 12. FIG. 13 shows pipes 110 jointed together using both the above-mentioned packing 160 and a clamp 170. When horizontal force is applied to the jointed pipes to make the interval between the pipes wider, the packing 160 is elastically deformed to widen its channel A, thus maintaining its close contact state relative to the pipes 110. When the horizontal force is removed from the pipes, the packing 160 elastically restores its original shape and returns the pipes to their original positions. The above-mentioned packing having the improved structure is advantageous in that the packing effectively maintains the sealed state of the jointed pipes regardless of an application of external force to the pipes and elastically returns the pipes to their original positions. However, the packing is problematic in that impurities may be deposited in the channel of the packing ~~to which~~ could reduce the fluid transmission capacity of a pipeline and cause propagation of bacteria in the channel. Furthermore, the above-

mentioned packing is specifically shaped to provide the channel as described above, so that the packing may fail to resist fluid pressure.

Please add the following new paragraph after paragraph number [0032]:

FIG. 11 is a view of a conventional pipe joint device.

Please replace paragraph number [0041] with the following rewritten paragraph:

[0041] Each of the clamps 30 has a packing seat 31 along an inner surface thereof. Both sides of each clamp 30, which define the packing seat 31 between them, extend inwards in radial directions to form support sidewalls 33, the inner diameter of which is smaller than the diameter of the packing seat 31. The support sidewalls 33 of the clamps 30 stop the outside ends of the flanges 11 so that the pipes 10 are not undesirably removed from the packing 20 or the clamps 30. The packing seat 31 is provided with a central rib 32 which is formed along the packing seat 31 to engage with the main channel 23 of the packing 20. In the present invention, the pipe joint device has two or three clamps 30 having the same shape formed by dividing a circular clamp body into two or three parts at the same angular intervals. The clamps 30 are placed around the packing ~~30-20~~ and are fastened together by the locking members 34, such as nuts and bolts, thus jointing the pipes 10 together.

Please replace paragraph number [0044] with the following rewritten paragraph:

[0044] FIG. 6 shows the pipe joint device of FIG. 5, which is assembled to joint pipes together. To joint pipes 10 together using the pipe joint device, the two flanges 11 are mounted to the ends of the pipes 10, and are fixed to the ends through, for example, a welding process. Thereafter, the ends of the pipes 10 having the flanges 11 are inserted into opposite ends of the packing 20 which is covered with the anti-friction member 60 on the whole area or a part of the outer circumferential surface thereof. In that case, if the packing 20 has the inner rings 21, the position of the packing 20 must be adjusted so that the inner rings 21 are brought into close contact with the ring grooves 12 of the flanges 11. However, if the packing 20 does not have any inner ring 21, positional adjustment of the packing 20 is not necessary. Thereafter, the clamps ~~34-30~~ are placed around the packing 20 with a metal ring 50 interposed between each sidewall of

the packing 20 and the inner surfaces of the clamps 30, and are fastened together by the locking members 34, thus jointing the pipes 10 together. The metal ring 50 may be previously mounted to each sidewall of the packing 20 or may be separately produced and placed on each sidewall of the packing 20 before the clamping process. While the clamps 30 are fastened together as described above, the position of the junction of the clamps 30 is preferably adjusted to form a deformed part 24 on a part of the packing 20 on which the anti-friction member 60 is placed. Thus, the pipe jointing work is easily executed. Furthermore, the support sidewalls 33 of the clamps 30 stop the outside ends of the flanges 11 so that the pipes 10 are not undesirably removed from the clamps 30.

Please replace paragraph number [0045] with the following rewritten paragraph:

[0045] When a packing 20 without an inner ring 21 is used, the inner surface of the packing 20 made of a soft material, such as rubber, is elastically deformed to fill the ring grooves 12 of the flanges 11 in response to compression force applied thereto by the fastened clamps 30. In other words, parts of the inner surface of the packing 20 protrude to form protrusions similar to the inner rings 21. Therefore, the operational effect expected from engagement of the ring grooves 12 with the inner rings 21 can be accomplished by a packing 20 without an inner ring 20. Furthermore, when the packing 20 is compressed by the adjusting members 40, the inner rings ~~21~~ ~~12~~ or protrusions, which are formed on the deformed packing 20 and have a shape similar to the inner rings ~~12~~ 21, can more closely engage with the ring grooves 12. The above-mentioned effect is more prominently revealed when the size of the clamps 30 is slightly smaller than the packing 20. However, when the clamps 30 in the above case are fastened together, the deformed part 24 of the packing 20 becomes larger to increase friction. Thus, the anti-friction member 60 must be used in that case.